Urban Forestry Services
BARTLETT CONSULTING
Divisions of The F.A. Bartlett Tree Expert Company

Title: **Issaquah High School #4 and Elementary School #17**
Third Party Arborist Review – Tree Evaluation and Retention Plan
Second Corrections Letter
4443 228th Ave SE
Issaquah, Washington

Prepared for: City of Issaquah
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Contents:

General Comments

Forest Stand Health

The Tree Retention and Evaluation submitted October 2019 by Zsophia Pasztor (hereafter: 2019 Arborist Report) for the forty (40) acre site being developed by the Issaquah School District found many of the trees in decline or dead. This is relevant for counting the number of healthy trees that will remain viable if retained, as required by city code. It is also relevant for managing the risk of individual trees failing and striking a target, as well as controlling the spread of any diseases spread through soil that may be present.

To validate the condition of the trees on the property being developed, I grouped them into separate stands based on their location and characteristics, such as age class and dominant canopy species. A general assessment of stand health will avoid the redundancy

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and time required for assessing the several thousand trees again individually, while confirming the overall health of the trees. It also allows for prioritizing the preservation of trees in healthier stands that may have higher preservation value, as allowed in the Central Issaquah Design & Development Standards Ch.10.13.A(2). My description and map of the stands are provided below as a reference.

As an overview of my observations, there are some forest health issues in several stands. As mentioned in the 2019 Arborist Report, there is a large proportion of the western red cedar *(Thuja plicata)* in Stand E that are partially dead or in decline. Many bigleaf maple (*Acer macrophyllum*) and red alder trees (*Alnus rubra*) in Stand B and D are in poor condition with significant crown dieback. It is conceivable that many of the trees on the property are non-viable, as stated in the 2019 arborist report. However, there are also several stands of semi-mature and mature trees that are healthy and viable. Stands A, F, G, and H have moderate stocking densities of Douglas fir (*Pseudotsuga menziesii*), western red cedar, and bigleaf maple. Although I did not see any signs of common root rot pathogens that use cedar as a host tree (e.g. Armallaria), it would be helpful to follow up with soil samples to confirm that the widespread cedar declines are related to drought and soil condition.

Response: We will coordinate with the City and Arborist to provide soil samples.

Correction: This issue is resolved. Soil samples taken found only phytophera, which is likely present throughout the site. Moving soil from one location to another is not likely to contribute to spreading disease.

Risk Management

I agree with the 2019 Arborist Report that the larger trees to be retained in the perimeter buffers are wind firm and unlikely to fail after other adjoining areas are cleared. Most of the trees are a low risk and they can be retained without further action, other than tree protection measures.

There are a few viable black cottonwood trees that are proposed for retention that have structural issues. Poor trunk taper and bowed tops towards neighboring structures may be a low risk now, but will become a problem as the trees grow and gain unbalanced weight. The 2019 Arborist Report did not specifically address risk ratings for retained trees near existing structures. This will need to be considered and trees in the perimeter within striking range of a structure should be assessed. Any trees removed for risk mitigation should be subtracted from the number of retained trees in the 25% minimum tree retention calculation.

Required Action: At some time in the near future, trees that target structures and high use areas offsite shall be assessed for risk of failure. Any viable trees removed shall be deducted from the minimum tree retention calculation.

Response: We agree that such trees should be assessed for risk and may be removed at a later date. However, because all standing trees, including dead (snags), dying, and diseased trees must be included in the 25% minimum tree retention calculations, these trees need to remain in place to meet the 25% minimum requirement unless the AAS for reducing the minimum tree retention requirements for the project is approved.

Correction: This issue is resolved. Agreed that meeting the 25% minimum tree retention will necessitate leaving the trees considered a higher risk until after construction is complete. Approval of the AAS to reduce the 25% and allow the removal of hazard trees at an early stage would be beneficial for the safety of construction workers and visitors to the site prior to completion.

Retained Tree Viability

The updated numbers of retained trees in the follow-up report titled Tree Retention and Re-evaluation submitted by the project arborist on August 2020 (hereafter: 2020 Arborist Report) subtracted the trees, mainly cedars, identified as dead from the number of retained trees in the 25% minimum retention calculation. It is not clear if the total number of trees counted on the entire property nor the number of retained trees includes declining cedars, alders, and maples in Stands C, D, and E. All significant trees, including dying and dead trees, need to be included in the count for total trees on the property. Retained trees for the 25% minimum retention cannot include dying or dead trees. The only trees to exclude from the count of total trees on the property are alders and cottonwoods with less than an 8-inch DBH, all other species with less than a 6-inch DBH, and any trees within a critical area and its buffer.

Required Action: Confirm if declining cedars, alders and maples are included in the count for total trees and retained trees. Subtract any trees within the wetland and buffer from the number of total trees on the property. Recalculate the percent retained if needed.

Response: Tree retention calculations have been updated to include all onsite significant trees, except the ones located within the wetland and its associated buffer to remain. Updated Tree Retention Calculations have been provided with this resubmittal.

Correction: This issue is resolved.

Prioritizing Tree Retention

As part of Ch.10.13.A(2), trees on slopes, in healthy groves, and more mature trees with higher preservation value should be prioritized for retention. The current site plan shows the largest save tree areas around Stands F, G, and H, which are on a slope, contain healthy groves, and have the largest trees. The criteria for retention priority is being met. In considering how to increase the percentage of retained trees, explore the potential to increase the save tree areas in these stands, if possible.

Required Action: Demonstrate that the maximum area to potentially save trees around the high preservation stands is being fully considered.

Response: The site plan has been revised to concentrate the site elements toward the center of the site. Site walls adjacent to the tree that were previously tiered to break up wall heights have been changed to single walls to save additional trees. Additional trees cannot be saved without reducing school programming requirements. An updated site plan showing the revisions has been included with this resubmittal.

Correction: This issue is resolved.

Tree Replacement Planting Areas

In walking through the property, it is apparent that the most open stands with lowest stocking density and understory vegetation are in the proposed buffers along the south and west property boundaries. These stands offer little in the way of visual and auditory screens for neighbors of the subject property. The open canopy does offer an excellent opportunity to replant new trees that will fill in the gaps to replace the declining trees and improve the function of a vegetative screen. Stands A through E should be given full consideration for replacement planting, which should be detailed on the site plan with proposed planting densities and tree species.

The 2019 Arborist Report recommends mulching or other soil amendments, which will help improve soil conditions, as will improving drainage for water logged soils. Where and how these amendments will occur should be added to the report. The 2019 Arborist Report also recommends removing the invasive Himalayan blackberry and English ivy. A statement on when and how this will be achieved at this scale should be included in the report.

Required Actions:

1. Confirm that the project landscape architect is planning on inter-planting with appropriate native trees where buffer vegetation is light.

Response: While the school district intends to supplement the buffer plantings during construction, it should not be a project requirement because the buffers provided far exceed the code required buffers. Additional planting may be completed at the school district's discretion.

Correction: This issue is resolved. Agreed that planting more trees specifically in the buffer is not a code requirement. Although it may not be a requirement for development of the site, the new property owner is highly encouraged to plant more trees in these areas to improve the sound and sight screening function of buffers. There is sufficient space in the buffer to plant additional trees.

2. Confirm that clear specifications are provided for planting and maintaining new plantings to ensure establishment and long-term survival.

Response: Project specifications will provide provisions for quality assurance of installation, such as installer qualifications and a warranty to ensure long-term viability of plantings installed.

Correction: This issue is resolved.

3. Confirm the immediate and long-term control of invasive plants, especially Himalayan and European blackberry.

Response: The contract plans and specifications will include language for contractor to remove all invasive species from the project site. Long-term control will be provided by the school district as part of routine maintenance.

Correction: This issue is resolved.

Stand Descriptions

A - The area at the southern end of the property is a wooded stand dominated by bigleaf maple and Douglas fir. Tree density is low to moderate with an open canopy formed by larger trees. General heights for the Douglas fir are 80 to 90 feet. The bigleaf maple are shorter within the range of 50 feet tall. There are no tree health issues in this area. Overall, the structure of the trees is stable and the remnant trees are likely to be resistant to wind throw when neighboring trees are removed.

B - The tree canopy on the southwest border next to Providence Point is dominated by bigleaf maple with a minor component of interspersed western red cedar, Douglas fir, and red alder. The majority of the cedar trees are in decline. Some of the maple trees have primary stems that failed and a few entire maple trees failed. Soils in this area were very wet at the time of the site visit, which may contribute to the likelihood of failure.

C - This area has a very open canopy and understory. The Douglas fir and bigleaf maple are semi-mature with few branches on the lower third of the trunk. As a result, there is very little vegetation providing a screen between the neighboring property and the subject

property. There are a few young fir and maple replacing the upper canopy, suggesting the area is suitable for replacement planting.

D - Very few trees are growing in this area at the southwest corner of the subject property. The trees present are mostly short bigleaf maples and red alder with some dieback and low vigor. Very poor draining soils may be contributing to poor tree health. Todd thought that the drainage patterns for this area will change after construction, potentially diverting away surface and ground water, which would be beneficial to their future growth. A second obstacle to tree establishment is a large patch of Himalayan blackberry at the very corner of the property where no trees are growing. Aggressive immediate as well as long –term control of the invasive weed will help with the establishment of replacement plantings.

E - The stand at the north end of the property is dominated by western red cedar and bigleaf maple. The majority of the cedars are in decline or already dead. Most are unlikely to recover and they could be considered non-viable. Healthy Douglas fir trees are growing in the buffer strip along the northern fence line near the declining cedar trees.

F - On the slope next to 288th Ave SE at the northeast section of the subject property is a stand of healthy semi-mature and mature Douglas fir, western red cedar, and bigleaf maple. The structure of the trees generally has characteristics for wind throw resistance, such as well-developed trunk taper and a minimum of 50 percent live crown to height ratio (LCR). The trees are spaced appropriately for their size. The stand of trees in this area has a high preservation value.

G - Another high preservation value stand are the tall Douglas fir and bigleaf maple canopy on the eastern slope part way down the property line from Area F. Tree spacing there is slightly more open, and the trees are healthy with good vigor.

H – At the south end of the slope is a stand dominated by large bigleaf maple. There are no health issues and the canopy is open enough to allow establishment of conifers. This area is a good candidate for replanting.

Code Specific Comments

City of Issaquah Development Standards Title 10 on Landscaping

10.3.A(2)

Code:

> Tree plans are required for any clearing and grading permit or other development permit and shall include a plan for the planting, removal, replacement and protection of trees. Vegetative mapping may be allowed in place of a detailed tree plan for lots greater than two (2) acres if Landmark Trees are identified and vegetation is characterized by dominant plant species and major undergrowth. The Tree Plan will be used to calculate Minimum Tree Density, as described in Section 10.10 Minimum Tree Density.

Comment:

The landscape plan included in the 2019 Arborist Report includes a site plan with the location of every surveyed tree. Each tree on the plan is marked for removal or retention

which was used for the Minimum Tree Density calculation. An updated summary table of removal and retention trees was provided in the 2020 Arborist Report. The development design has since changed with different clearing and grading limits that will affect the number of removal trees, making the previous site plan outdated. The site plan in the Arborist Report did not include the location or description of tree protection measures for retained trees, other than a rough outline of where tree protection fencing would go. The site plan does not show where or what replacement plantings will be made.

Correction:

1. Please provide a new site plan with the current clearing and grading limits showing where trees will be removed.

Response: A new site plan with updated clearing and grading limits was provided with the February 22, 2021, revised land use plans. A copy of this site plan has been included with this resubmittal. Further refinement of that site plan and refinement of trees and grading limits will be included with the construction permit drawings.

Correction: The current site plan with clearing and grading limits that also shows trees to be removed and retained is acceptable at this time. Refinements to the plan for the construction permit drawings will need to be reviewed for code compliance prior to final approval. Changes to the number of trees that can be retained based on any refinements will need to be updated.

2. Add the location of tree protection measures for retained trees, such as tree protection fencing, to the site plan. Illustrating these plans at 1/20 scale is recommended. Tree protection fencing should be outside the dripline of retained trees, unless a certified arborist provides a specific plan for protecting the health and stability of a tree with construction within the dripline.

Response: The location of tree protection measures and details will be included on the construction permit drawings. The plans will be at 1/20 scale.

Correction: The plans will be reviewed when they are submitted on the construction permit drawings.

3. Show the location of replacement plantings on the site plan with notes on selected tree species.

Response: Updated planting plans were included with the February 22, 2021, revised land use plans that show the location, species, size, and planting details for proposed trees. A copy of this plan has been included with the resubmittal. Planting plans with the same information will be included in the construction/permit plans for the project.

Correction: This issue is resolved.

10.3.A(4)

Code:

Planting and Irrigation Details: Planting details are adopted through administrative rules approved by the Director. All planting and irrigation plans, details and plant materials shall conform to the guidelines set forth in this chapter and administrative rules available at the Permit Center.

Comment:
Page 4 of the Arborist Report makes recommendations for tree species to plant. There is not a description of planting standards, such as planting hole and soil preparation, browse protection, or staking, and maintenance. There is not a description of planting spacing to achieve the desired density appropriate for the selected trees replanting species.

Correction:

1. Please include a detail of the planting standard on the landscaping site plan set.

Response: Updated planting plans were included with the February 22, 2021, revised land use plans that show the location, species, size, spacing, and planting details for proposed trees. A copy of this plan has been included with the resubmittal. Planting plans with the same information will be included in the construction/permit plans for the project.

Correction: This issue is resolved.

2. Describe in the report the spacing and target density for planting trees in each area available for planting.

Response: Tree sizes and spacing are included in the landscape planting plans. A copy of this plan has been included with the resubmittal.

Correction: This issue is resolved.

3. The project arborist or landscape architect should provide specifications for planting on how the new tree plantings will receive sufficient water to successfully establish.

Response: Project specifications will include information on how to maintain viability of plantings during the warranty period.

Correction: The project specifications will be reviewed when they are submitted, presumably with the construction plans. ISD_SDP20_00001_2R_Partial Site Plan Sheet 11 from Feb. 22 has planting specs, but no watering or irrigation specs.

10.5 – Landscape and Decorative Requirements for Parking Areas

Code:

The chapter on parking area requirements outlines the standards for tree density and planting relative to paved parking.

Comment:
The main parking area east of the athletic stadium may be large enough to qualify for minimum planting standards. There is no mention of parking area trees in the Arborist Report nor on the conceptual site plan.

Correction:

1. Describe in the report the number and location of trees to be planted for applicable parking areas that meets the planting requirements of this section.

Response: Updated planting plans were included with the February 22, 2021, revised land use plans that show the location, species, size, spacing, and planting

details for proposed trees in the parking areas. They also include Landscape Calculations for the parking areas to show how all landscape requirements are being met for parking areas. A copy of this plan has been included with the resubmittal.

Correction: Landscape Calculations on L2.5 of ISD_SDP20_00001_2R_Partial Site Plan calculate 9 trees to be planted on the parking interior to match the number of planned parking spots. All trees on the sheet appear to be on the perimeter of the parking area. Please update the plan to include 9 trees in the parking interior. The intention of trees within a large parking area is to visually break up the paved surface as well as increase shade and assist with stormwater management. In your design of the tree locations, grouping the trees together in the same planting area is better than planting them individually an equal distance apart. For example, plant 3 groups of 3 trees instead of a single tree every 100 feet. There are many innovative designs for capturing, storing, and the slow release of surface water run off that integrate and benefit trees surrounded by paved surfaces. Consider a planting area system that combines with stormwater management design.

2. Show the tree plantings on the development site plan.

Response: Updated planting plans and subsequent landscape permit/ construction plans to follow have/will have tree plantings shown.

Correction: This issue is resolved. Tree planting locations are shown on ISD_SDP20_00001_2R_Partial Site Plan.

10.10 – Minimum tree density

Code:

A. A minimum tree density of retained and replanted trees shall be maintained in the Developable Site Area of all developed sites. The minimum tree density shall be four (4) significant trees (or their equivalent size in caliper inches at 4.5 feet above ground) per 5,000 square feet of Developable Site Area.

B. Alternative Locations: Where the Director determines it is not feasible to maintain the minimum density on site, to fulfill the balance of the minimum density, the City may accept planting off site or payment to the City Tree Fund as established in Section 10.14 Replacement Trees. Replanted trees and tree funds received shall be directed to Replacement Trees within Central Issaquah.

Comment:

Based on the size of the entire lot, the Arborist Report stated that the minimum number of trees to retain and replant on-site is 1,326. The number of proposed retained trees as of January 6, 2021 is 536, as indicated in an email from the developer. So, 790 trees will need to be replanted on-site to meet the minimum tree density requirement. The 2019 and 2020 Arborist Reports do not mention if the re-planting areas on-site will provide sufficient space for 790 new trees.

The Developable Site Area is not necessarily the same size as the entire property. The developable Site Area does not include critical areas and their buffers. The minimum number of trees to retain per square foot should be recalculated to exclude the square feet within critical areas and their buffers.

Correction:

1. Calculate the number of new trees that can be planted at appropriate spacing or density in the available planting areas. From my site visit, there is available space in most of the buffer areas to plant replacement trees, as well as on other areas of campus where landscaping is proposed after clearing and grading is complete. Typical spacing between tree plantings for larger species, such as western red cedar and Douglas fir, is a minimum of 20 feet and as much as 30 feet. Trees that are smaller at maturity can be planted at higher densities. If fewer than 790 trees can be planted on-site, state how many will be compensated for by contributing to the City Tree Fund or planting off-site, whichever is approved by the Director.

Response: Revised land use plans submitted on February 22, 2021, include number, location, species, and spacing requirements for all trees. A copy of this plan has been included with the resubmittal.

Correction: The minimum number of retained and planted trees calculated by the project arborist is 1,326. I counted 471 trees planned for retention on the tree tables on sheet L0.8 and L0.9 of SDP20_00001-2R-Tree-Retention-Plan_2021_03_22. The number of trees needed to plant to meet the requirement is 855. I counted 483 on the landscaping plans ISD_SDP20-00001-2R-Partial-Site-Plan. There is still a deficit of 372 trees to meet this requirement. Please either add more plantings to the site plan, such as interplanting between existing trees in the buffers. If it is not possible to plant more trees on-site, please indicate the number of trees you are requesting to plant off-site or pay in lieu of to the city tree fund.

10.11(E) – Tree Removal on Vacant and Developed Properties

Code: In critical areas and in all native growth protection easements, tree removal is prohibited except as allowed per Chapter 18.10 IMC, Environmental Protection.

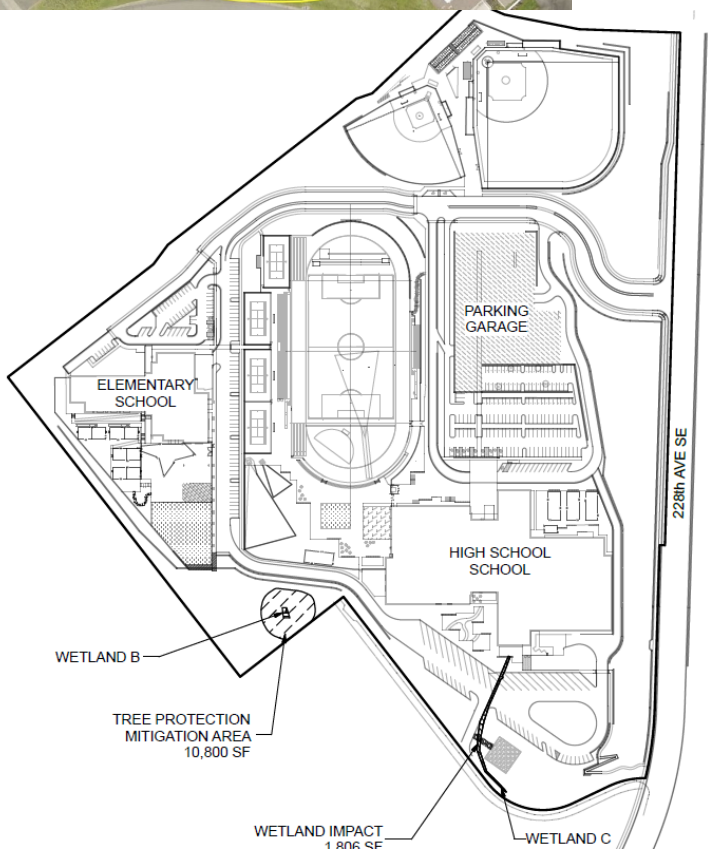
Comment: there were two wetlands identified on the property. Wetland C has since been omitted from the area by the project wetland biologist. Wetland B and its associated buffer are primarily within a save tree area, although the buffer is not shown on the site plan.

Correction:

1. Please add an outline of the buffer for Wetland B to the site plan showing that trees within the buffer will not be removed unless they are considered a hazard.

Response: Wetland B and its associated buffer are shown on the revised planting plans included in the February 22, 2021, land use resubmittal. A copy of this plan has been included with the resubmittal.

Correction: This issue is resolved.



10.13 – Tree Retention Requirements

Code: The soil grade around an individual tree within a cluster designated for retention shall not be altered within the critical root zone of the tree or within 15 feet of its trunk, whichever is greater. Trees shall not be designated for retention if they are dead or in a declining state, or if they are hazardous.

Comment: Disturbance limits (i.e. distance between the tree trunk and tree protection fencing) are not shown nor described in either Arborist Report. How the soil grade will be protected and at what distance is not mentioned. It is not clear if the trees listed for retention include declining (e.g. cedars) or potentially hazardous (e.g. bowed cottonwood) trees.

Correction:

1. The distances between the trunks of retained trees and the location of tree protection fencing should be either shown on the site plan or described in the arborist report. Justification for using either the critical root zone or 15 feet should be provided.

Response: The location of the tree protection fence and its relationship to the trunk/critical root zone will be provided on the construction/permit drawings.

Correction: Review will be required prior to final approval.

2. An explanation of how declining trees were identified should be provided, along with any adjustments to the number of retained trees to meet the city code.

Response: Visual inspection of the trees was conducted on numerous occasions. The health of the tree does not appear to be relevant in Issaquah's code.

Correction: This issue is no longer relevant. It is resolved by confirmation that all trees, including dead and dying, are included in the count of trees on-site that is used for the minimum 25% retention calculation.

10.13(A)(1)

Code: Significant trees on lots proposed for project development or redevelopment in Central Issaquah shall be retained as follows:
a) 25% of the total caliper (4.5 feet above ground or "dbh") of all significant trees in Developable Site Area shall be retained except as modified by "Modification to Tree Retention Requirements" below.

Comments: Both the 2019 and 2020 Arborist Report show tree retention to be less than 25 percent. As mentioned in the general comments above, the numbers of total trees on the property and trees to be retained may need to be adjusted and the percentage recalculated.

Correction: Demonstrate how 1) excluding non-viable trees from the calculation changes the percentage retained,

Response: An AAS requesting adjustment of the tree retention requirements has been submitted. Including non-viable trees in the calculation makes it not feasible to meet 25%, as discussed in the AAS request. A copy of the AAS documents sent has been provided with this resubmittal.

Correction: This issue is no longer relevant. Non-viable trees are not excluded from the calculation. The AAS letter is submitted instead.

and 2) how adjusting the clearing and grading limits will increase the percentage of retained trees. A minimum of 25 percent of the significant viable trees on the property will need to be retained for this development.

Response: As previously discussed, clearing and grading have been adjusted as much as feasible without reducing the programming requirement.

Correction: This issue is resolved.

10.13(A)(2)
Code: Priority of Tree Retention Requirements

Comments: The proposed save tree areas are meeting the goals of this section.

Correction:
1. Extend the save tree areas around Stands F, G, and H, if possible.

Response: Tree save areas around stands C, D, E, and F have been increased to the maximum extent feasible. Because of grading, programming, required rightof-way improvements, neighbor buffering, etc., expanding tree saves around stands G and H are not feasible.

Correction: This issue is resolved.

10.14.A(2) - Replacement trees
Code: One (1) replacement tree for every six (6) inches of caliper at dbh of trees removed if remaining tree density is below the minimum requirements in, Section 10.10 Minimum Tree Density requirements.

Comments: The minimum tree density as proposed now will be below 4 trees per 1,000 square feet. The calculation for number of replacement trees is based on a 1:1 ratio of tree removal to tree replacement instead of 1 tree for every 6 inches of dbh.

Corrections:
1. Re-calculate the number of replacement trees as follows: add the dbh of trees being removed below the 4 per 1,000 minimum requirement, then divide the total inches by 6 for the number of replacement trees.

Response: To be provided once Reduced Tree Retention AAS Request has been approved or denied.

Correction: No action is required at this time. This correction is clarified as follows: The letter with the AAS Request pertains to section 10.13 and the 25% minimum retention. Section 10.10 is a separate minimum retention *and* planting requirement that could still be met by planting more trees on-site (my calculation is 372). Section 10.14.A(2) is being interpreted as how to replace trees that are removed after the landscaping and construction permit plans are approved due to necessary revisions. For example, hypothetically another 372 trees are placed on the landscaping plan now to meet the requirement of 10.10 and the plans are approved based on those tree numbers. If there is a change in the design or clearing limits, and 80 trees originally planned for retention will need to be removed, then they will be replaced with one tree for every six inches of caliper at dbh. If the calculated number of trees cannot be planted on-site, then the number calculated will be planted off-site or paid in lieu of in the city tree fund.

10.14.A(3)
Code: All replacement trees shall be:
a. A minimum of two (2) inch caliper for deciduous trees and seven (7) to eight (8) feet tall for conifers for multifamily and commercial lots

Comments: The size of replacement trees is not stated in either Arborist Report.

Corrections:

1. Confirm that the replacement trees will meet the size standards of this section.

Response: The revised planting plans included in the land use plans resubmitted on February 22, 2021, have information regarding the replacement tree sizes. A copy of this plan has been included with the resubmittal.

Correction: This issue is resolved.

10.14.A(4)

Code:Tree replacement must be completed by the end of the calendar year the tree is removed.

Comments: The timing of tree replacement relative to calendar year is not mentioned in the arborist report. Optimal planting time is from October through March.

Correction:

1. Submit a timeline for planting in relation to clearing and grading that allows for trees to be planted in the optimal season in the same calendar year they are removed.

Response: Because of the size and scope of the project, removing and replanting in the same calendar year is not feasible. The master plan process that the school has submitted for is intended to deal with large projects, phasing, and multi-year construction. We believe that conditioning the project to provide the trees prior to certificate of occupancy seems like a better requirement.

Correction: It is understandable that the location where trees are intended to be planted may not be ready within the narrow time line defined by the code. However, planting trees as early as possible will allow the canopy lost from removed trees to be replaced as quickly as possible. Establishing planting areas in an early stage after clearing and grading will help protect the soils during the later construction stages when they can easily be compacted or contaminated. It is not unusual for multi-year projects to plant at least some trees prior to erecting buildings, for example.

To stay with the intent of the code and set a realistic goal for a project of this scale, 100% of trees should be planted a minimum of 12 months prior to the scheduled certificate of occupancy.

10.14.B.

Code: Replacement trees must be staked, fertilized, mulched and protected as required in Section 10.17, Landscape Requirements and Specifications. Fifty (50) percent of replacement trees must be evergreens for the replacement of evergreen trees or deciduous if a deciduous tree is removed.

Comments: There is no description of planting standards in the arborist report. Some tree species are recommended, but not their numbers nor proportion.

Correction:

1. Include a planting standard in the arborist report and on the site plan. Give the estimated number of each species that will be planted, with at least 50 percent of

removed conifers replaced by conifers and 50 percent of removed deciduous replaced by deciduous tree species.

Response: The revised planting plans included in the land use plans resubmitted on February 22, 2021, have information regarding the replacement tree sizes, numbers, species, spacing, etc. A copy of this plan has been included with the resubmittal.

Correction: Please provide a table on the landscaping plans, ISD-SDP20-00001-2R-Partial-Site-Plan, or in a revised arborist report that summarizes the following (NOTE: the numbers should include the additional trees remaining in the balance to meet the minimum set forth in section 10.10):

	Deciduous Trees	Conifer Trees	Proportion D/C
Number Removed			
Number Planted			

For the purposes of this project and meeting the intent of the section, the proportion of deciduous trees to conifer trees planted should be +/- 20% the proportion D/C removed. If the proportion of each type of tree planted is off by more than 20%, please adjust the landscaping plan until it is within range.

10.14.C – Replacement Tree Location

Code:

1. Location On Site: To the extent feasible, trees shall be relocated or replaced on site.
2. Relocation or Replacement Off Site: Where it is not feasible to relocate or replace trees on site, relocation or replacement shall be made at another Director approved location in the Central Issaquah Area.
3. Payment into City Tree Fund: If a suitable relocation site is not available, the applicant is required to pay into the City Tree Fund an amount of money approximating the current market value of the replacement trees and the labor to install them.

Comments: The Arborist Report suggests that it may not be possible to plant all the required replacement trees on-site. It does not calculate the number of potential trees that can be planted at adequate spacing in the available planting areas.

Correction:

1. Present the number of trees that can be planted on-site. For any amount below the minimum required, indicate how many the Director would need to approve to be planted off-site or expects to receive a fee-in-lieu for the City Tree Fund.

Response: The revised planting plans included in the land use plans resubmitted on February 22, 2021, have information regarding the replacement tree sizes, numbers, species, spacing, etc. A copy of this plan has been included with the resubmittal.

Correction: This number of replacement trees to be planted on-site, off-site, or a fee in lieu is the same for section 10.14.A(2) above. Please refer to my estimate or provide your own estimate, and then break down how many of those trees will be planted A)on-site, B)off-site, C) fee in lieu.

Review of request for Administrative Adjustment of Standards (AAS) for City of Issaquah Development Standards 10.14 on Tree Retention Requirements

Overview

Todd Sawin is requesting an AAS for the tree retention requirements related to the Issaquah High School #4 and Elementary School #17, Project AHBL No. 2180412.10.

The city Development Code requires that a minimum 25 percent of significant trees be retained:

10.14.A.1(a):

A. Tree Retention Requirements:
1. General Tree Retention Requirements: Significant trees on lots proposed for project development or redevelopment in Central Issaquah shall be retained as follows:
a) 25% of the total caliper (4.5 feet above ground or "dbh") of all significant trees in Developable Site Area shall be retained except as modified by "Modification to Tree Retention Requirements" below.

Mr. Sawin believes that the project cannot be completed with 25% of the existing trees retained and still meet the development requirements for the school campus. He is proposing that the minimum requirement be lowered to 23%, instead. In doing so, he hopes to meet the exemptions of 10.14.A.1(a) and also stay within the intent of the code. Allowable modifications to the section of code are:

B. Modification to Tree Retention Requirements: A reduction of the tree retention requirements may be approved by the Director provided the following criteria 1-4 and/or criteria 5 are met. In all modifications, criteria 6 is required to be met:
1. The modification is consistent with the purpose and intent of this Chapter, and the Central Issaquah Plan goals and policies.
2. The modification incorporates the retention of a grouping(s) of smaller trees that make up the equivalent diameter inches and retains other natural vegetation occurring in association with the smaller tree grouping(s).
3. The modification is necessary because the size, shape, topography, location of the subject property may jeopardize the reasonable use of the property and reasonable alternatives do not exist.
4. The modification is necessary because the proposed buildings and site layout, required ingress/egress, existing and proposed utility locations, trails, storm drainage improvements or similar constraints may jeopardize the reasonable use of the property and reasonable alternatives that are consistent with the Central Issaquah Plan do not exist.
5. The modification is necessary to provide solar access to a building that incorporates active solar devices. Windows are solar devices only when they are south-facing and include special storage elements to distribute heat energy.

6. The applicant replaces trees on site and/or off-site or pays a fee in-lieu-of in accordance with 10.14.C-D Replacement Trees for reductions less than the minimum tree density requirement.

Compliance with Modification Criteria

The proposal to reduce the minimum percentage of retained trees from 25 to 23 meets the criteria B(1)-(4).

B.1. The intent of the chapter is to protect an environmental resource that has community wide benefits. Trees are a valuable asset to our lands. Some of the stands planned to be retained at this site are mature or semi-mature trees on slopes. Their ecological services will be maintained after the project is complete. Many of the trees planned for removal are in poor condition and some are in decline. Their ecological performance is perhaps lower than many of the retained trees. As a result, the drop in ecological function after the proposed removals may be less than would be expected if most of the trees were healthy. Additionally, the developer is making attempts to save as many trees as possible and avoid unnecessary canopy loss, which is difficult for a project of magnitude and acreage of this size. Some of the trees requested for removal are potentially hazardous trees and their removal makes the project area and future campus safer for users. A 2% change in the number of retained trees will stay consistent with the intent of the chapter.

B.2. Areas where trees will be retained include stands of mixed age, size, and species. There is fully the potential for the smaller trees present in the stands to grow and reach maturity, adding to the canopy. Understory vegetation in the stands includes native ground cover and shrubs. Stands are being retained in groups that will facilitate their continued growth and viability.

B.3. Elevation changes throughout the site. Fitting in all the different facilities, buildings, and infrastructure will require substantial grading across the property. Many of the existing trees are outside the footprint of proposed buildings, but within the grading limits. The site topography is certainly a major factor in tree removals that would otherwise be avoidable.

B.4. This is a unique development project. A school campus has multiple elements, many of which are impossible to exclude without losing major function of the whole. The campus design currently optimizes the layout of those different elements to meet the needs of the number of students the school district expects to serve. Mr. Sawin believes that there is no more flexibility for adjusting the layout without significantly impacting the building requirements or function of the campus. As a result, the clearing and grading limits cannot be shrunk to save more trees at this time.

B.6. Depending on the number of trees represented by a 2% difference from 25% to 23%, it may be possible to plant the number of deficit trees on-site. I estimated 372 tree plantings are still needed to be added to the landscaping plans to meet the requirements of Development Code 10.10, which is separate from this AAS. In the letter requesting the AAS, Mr. Sawin does not state how many trees this is. To fulfill this requirement criteria, the applicant will need to:

1. Calculate the number of trees that would be removed below the 25% amount if an AAS were to be approved for 23% retention,
2. Show on the landscaping plans where all of those trees would be planted on-site,
3. Propose an alternative off-site planting location that would be approved by the Director, or
4. Calculate the number of trees that cannot be planted on- or off-site and pay a fee in lieu of to the city tree fund.